



CLAIMS

What is claimed is:

1. An electronic fever thermometer comprising:
- a temperature sensor;
  - an electronic circuit coupled to the temperature sensor to process temperature data measured by the temperature sensor;
  - a display element coupled to the electronic circuit to display a temperature corresponding to the temperature data measured by the temperature sensor; and
  - a housing formed by an injection molding die, the housing including a main part formed as a single monolithic unit made of a transparent material enclosing the electronic circuit, the housing having:
    - a first surface area constituting a display window and consisting of the transparent material in an untreated state that renders the display element to be visible through the housing, and
    - a second surface area treated by a roughening process that imparts an opaque finish to the transparent material and that renders at least a portion of the electronic circuit enclosed within the housing to be substantially non-viewable relative to the display window, the roughening process involving chemical etching of a surface of the injection molding die.
2. An electronic fever thermometer according to Claim 1, wherein the viewing area and the display element are substantially congruent.

3. An electronic fever thermometer according to Claim 1, further comprising a cover part, wherein the main part and the cover part are each produced in one piece from transparent plastic material.

4. An electronic fever thermometer according to Claim 1, wherein the thermometer includes a metal tip, the metal tip being disposed at one end of the housing, the temperature sensor being positioned in the metal tip.

5. An electronic fever thermometer according to Claim 1, wherein the display element includes an LCD display.

7. An electronic fever thermometer according to Claim 1, wherein the thermometer includes a battery that is permanently affixed within the housing.

8. An electronic fever thermometer according to Claim 1, wherein the housing includes a switch.

9. An electronic fever thermometer according to Claim 1, wherein the thermometer is sealed by ultrasonic welding.

10. An electronic fever thermometer according to Claim 3, wherein the main part and the cover part are made from polycarbonate.

17. An electronic thermometer comprising:  
a temperature sensor;  
an electronic circuit coupled to the temperature sensor to process a temperature measured by the temperature sensor;

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a display element coupled to the electronic circuit for displaying the temperature measured by the temperature sensor; and

a housing made from a transparent material formed by an injection molding process using a die, for housing the temperature sensor, the electronic circuit, and the display element, the housing having:

a substantially transparent viewing portion positioned to allow viewing of the display element, and

a light diffusing portion configured to be rougher in texture and substantially less transparent than the viewing portion so that light passing through the light diffusing portion is diffusely scattered, the light diffusing portion positioned to render at least a portion of the electronic circuit housed within the housing to be substantially non-viewable relative to the viewing portion, the light diffusion portion formed by a chemically-etched surface of the die.

19. 7/4 An electronic thermometer according to Claim 17 wherein the housing comprises an outer surface and an inner surface, and wherein a portion of the inner surface exclusive of the viewing portion is roughened to produce the light diffusing portion, and the outer surface is left untreated to appear smooth relative to the roughened portion of the inner surface.

20. An electronic fever thermometer according to Claim 1, wherein the second surface area comprises a roughened area on an inner surface of the housing.

21. An electronic fever thermometer according to Claim 1, wherein the second surface area comprises a roughened area on an outer surface of the housing.

22. An electronic thermometer according to Claim 17 wherein the housing comprises an outer surface and an inner surface, and wherein a portion of the outer surface exclusive of the viewing portion is roughened to produce the light diffusing portion, and the inner surface is left untreated to appear smooth relative to the roughened portion of the outer surface.

23. An electronic fever thermometer comprising:

a temperature sensor;

an electronic circuit coupled to the temperature sensor to process temperature data measured by the temperature sensor;

a display element coupled to the electronic circuit to display a temperature corresponding to the temperature data measured by the temperature sensor; and

a housing formed by an injection molding die, the housing including a main part formed as a single monolithic unit made of a transparent material enclosing the electronic circuit, the housing having:

a first surface area constituting a display window and consisting of the transparent material in an untreated state that renders the display element to be visible through the housing, and

a second surface area treated by a roughening process that imparts an opaque finish to the transparent material and that renders at least a portion of the electronic circuit enclosed within the housing to be substantially non-viewable relative to the

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display window, the roughening process involving mechanical etching of a surface of the injection molding die.

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24. The electronic fever thermometer of claim 23 wherein the roughening process comprises grinding the surface of the injection molding die used to form the housing.

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